THE STAPLE TRADE OF CANADA.

A LECTURE

DELIVERED IN THE

TEMPERANCE HALL, OTTAWA,

ON

TUESDAY, 18th MARCH, 1862,

BEFORE THE

MECHANICS' INSTITUTE AND ATHENÆUM,

BY

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OTTAWA:

PRINTED AT THE "UNION" CALORIC ENGINE POWER PRESSES, CORNER OF SUSSEX AND YORK STREETS.

LECTURE.

Mr. President, Ladies and Gentlemen:

Agriculture, commerce and manufactures, are the primary conditions on which our social system is based. Without the first, mankind must speedily assume the savage state in which the characteristics of the mere beast of prey would predominate; where the softer and more humanising ties of our nature are relaxed, and where, failing the supply of wild beasts of chase, the genus homo would display the propensities of all carniverous animals, and prey upon its kind. Causes similar to these have prevented the increase of savage nations, and compelled, by mere intuitive reason, the first step of advance, in the social scale, by banding the tribes of mankind together for self-defence. On the other hand, agriculture without commerce produces, as far as the diffusion of population is concerned, a nearly similar effect. That simple pastoral state so lauded by poets is the sole creation of a fervid imagination, unrestrained by practice and untrammelled by the common-place contingencies of actual fact. A nation solely devoted to agricultural pursuits will fail to expand into a great people. The history of God's chosen race is an exemplification of this fact; their approximate census on their Exodus from Egypt was probably 3,000,000 of souls, and on their final dispersion, 1600 years afterwards, that number had not sensibly increased. One of the great causes of their isolation from the rest of mankind was the absolute necessity imposed by their law of judicial purification, which it would be impossible to observe to the letter if the nation had been a commercial people. When in the course of events the tribes became scattered abroad, the departure from the precepts of those Divine institutions, and the lamentable consequences to themselves, are to be found in the pages of their great Historian, Josephus.

All writers have endeavoured to discover in what country commerce was first practised. The oldest of all written records, the Bible, speaks of it as an act of every day life; and the first authen-

tic description of its operations discloses the melancholy fact that the Midianitish merchantmen, coming "from Gilead, with their "camels, bearing spicery and balm and myrrh, going to carry it "down to Egypt," also dealt in the bodies of men. In fact, the first distinct notice we have of commerce is in connection with that most detestable of all traffic, the slave trade.

The connection between commerce and manufactures is sufficiently obvious, as the merchant must necessarily require the labour of the artizan to construct his roads, make his camel furniture, or pack saddles; in a more advanced stage, build his boats, ships, and other modes of transmitting the productions of one country to supply the deficiences of another. The great centre of ancient commerce appears to have been in Egypt. That long narrow valley traversed for nearly a thousand miles by its noble river, abounding in the production of those cereals so necessary to the sustenance of man, was yet wanting in those luxuries which a high state of civilization demands. Active and diffusive as ancient commerce may have been, it was a mere fraction of that witnessed by modern days. Its great expansion is due to the invention of the mariner's compass, to the improvement in the method of propulsion, and to the discovery of steam power, as applicable to modern purposes. It is quite possible and more than probable, that the trade of this Province exceeded considerably the traffic of all the nations of the civilized world in the days of Solomon, and that the four million of tons annually shipped from, or arriving at our ports was beyond the utmost powers of the Phœnecian, Egyptian, Roman, or Carthaginian navies. As the object of commerce is to supply the deficiencies of one country, by the surplus productions of another, it is evident this consideration of the connection of the primary principles on which all social order is founded naturally brings us to the subject of the lecture this evening. It belongs to the second of those necessary conditions mentioned, and has become an important item in the social condition of this country. The Staple Trade of this Province, generally known as the Lumber Trade, is a very ancient element of commercial importance. The Sidonians, or Ancient Phœnecians, were the great Lumber Manufacturers of their day; and the Forests of Lebanon furnished the Cedars and Firs which Hiram, King of Tyre sent by sea, "in Flotes to Joppa," thirty-eight miles from Jerusalem, for the building of the Temple. Its connection therefcre with the infancy of commerce is not only beyond all conjecture, but we are told that the Sidonians excelled all other people in their skill at hewing Timber.

It was then, as it is now, an essentially necessary feature of the profitable prosecution of this Trade, that it should be carried on where water communication was easily attained. The many rapid rivers rising in the Lebanon range, and passing into the Mediterranean Sea, on the Syrian Coast, furnished the necessary facilities for this purpose, and no doubt the Phœnecian raftsmen of that day were as well posted in all the mysteries of the *drive*, as his Canadian successors. This ancient Lumber traffic had other elements in common with that of more modern days. Though carried on under the burning sun of Syria, the lofty mountain range of Lebanon experiences all the rigors of a Canadian winter, and to this day it is no uncommon thing to find the sites of the ancient forest inaccessible in the month of June, in consequence of the quantity of snow still on the ground.

The trade in Lumber has always been of importance. Ancient Egypt, the Granary of the then known world, consumed large quantities of Wood, and as it does not produce Timber, the great proportion of its supplies were imported. Italy, the next centre of civilization, dealt largely in Timber, and in fact it may be said to have been a large item in the commerce of civilization, in ancient as well as in modern times.

The variety of Timber which constitutes the Staple Trade of Canada is known as the Pine or Fir. It is widely diffused over the surface of our Globe, and is common alike to the wilds of Siberia, the slopes of the Himalayas, the isles of the South Sea, the plains of South America, the acclivities of the golden Sierras of California, and the mountains of Canada. It is common in Northern Europe, widely diffused over Asia, constitutes the principal Forest tree of America, and some of its varieties are to be found in Africa. In point of utility, the Pine, as a Forest tree, ranks next, if it is not superior to, the Oak. At any rate it is more extensively used, both in the arts and as an economical production. There are about twenty varieties of Pine; each marked by distinctive and well known peculiarities, but all having strongly defined affinities, so that it would be no easy matter to mistake that species furthest removed from the true Pine, for any other variety of Forest tree. One of the principal characteristics of the Pine family arises from the fact that they do not bear flat leaves, but a species of spines, which are however real leaves. They are chiefly, but not all evergreens, and the appearance of the tree, as well as the quality of the Timber, varies with the species, and also with the situation

in which it is found. Generally speaking, the Timber is hardest and best in exposed, cold situations, and when its growth is slow.

The greater number of the species are tall and lofty trees, and they all yield an essential oil, well known as Turpentine; and Resin, or Gum.

The Pine Family have been divided by Botanists, into thirteen Genera, containing a considerable number of species. The Genera are:

Pinus	The Fir.
Abies	Spruce.
Larix	Larch.
Shubertia	Deciduous Cypress.
Cupressis	Cypress.
Thuja	Arbor Vitæ.
Juniperius	Juniper.
Araucarius	New Holland Pine.
Belis	Javelin Shaped.
Agathus	Dammer Pine.
Exocarpus	Cypress Like.
Podocarpus	Chinese Pine.
Taxus	Yew.

The general name Pine has been derived from the Celtic, which, like all original languages, is highly descriptive, and the proper names of all natural productions of the countries inhabited by that race were always explanatory of some prominent quality in the subject designated, or some peculiarity of the locality in which it was placed. Thus in this case, the topographical peculiarity of the country producing this Timber has given its name and distinguishing title to the whole family of which it is composed. Pin or Pen, in the ancient Celtic, signified a Rock, and, as is well known, a rocky soil is the chief favourite locality where those trees are to be found. In the enumeration of the different species of this tree, the Scotch Pine (Pinus Sylvestris), generally stands first in the list. It is commonly called the Scotch Fir, and appears to be indigenous to Scotland, but it is common to all parts of Europe, from the Alps to the Baltic, and from the shores of the German Ocean to the Ural Mountains. It attains in favourable situations, a height of 80 feet, and 4 to 5 feet in diameter. It is doubtful whether any portions of the aboriginal Pine Forests exist in England. In Scotland, the Forests of Invercauld and Rothiemurchess exhibit the finest specimens of this tree extant in

the British Isles, while the sole representatives of the magnificent Forests which once covered the 12,000,000 acres of waste land in Ireland, are reduced to two venerable trees on the Estate of Richard Nugent, Esq., near Woodford, in the County of Galway, both of which had lost their powers of reproduction, through extreme age. The other European species are the Corsican Pine (Pinus Laricio), which is nearly allied in character to the Scotch Pine, but is a much finer tree. It grows wild on the summits of the highest mountains of Corsica. The Cluster Pine (Pinus Pinaster), is an ornamental tree peculiar to Switzerland and the Italian Mountains; its principal use is in the formation of shingles for house roofing, in Switzerland, and its chief value arises from its beauty as an ornamental tree. Of the same character is the Stone Pine (Pinus Pinea), of Southern Italy; its seeds, as well as those of the Cluster Pine, are eaten by the inhabitants of that country, rich and poor; they are as sweet as almonds, but partake slightly of a Turpentine flavour,—the tree can only be considered for its effect in the landscape. The Siberian Pine (Pinus Cumba), grows higher up the Alps than other Pines, and is found at elevations where Larch will not grow. The wood is very soft, and having scarcely any grain it is much used by the peasants of the Tyrol, where it abounds, for carving. The Canary Pine (Pinus Canariensis), grows in the high mountains of the Canary Islands, at an elevation corresponding to the coldest parts of Scotland; the wood is resinous, highly inflammable, and is well adapted for building material, as it lasts for ages.

Michaux enumerates ten species of American Pine, the principal of which are the Red Pine (Pinus Rubra), sometimes called the Norway Pine. It is found in Canada, Nova Scotia, and the Northern parts of the States. It generally occupies small tracts of a few hundred acres, either alone or single with White Pine. It grows in dry and sandy soils to the height of seventy or eighty feet, and about two feet in diameter. It is chiefly remarkable for the uniform size of its trunk for two-thirds of its length. The bark is of a clearer red than that of the other species. The wood has a fine compact grain and is very resinous. It is generally employed in Naval Architecture, and affords masts for the largest ships.

The Yellow Pine (Pinus Mitis), is widely diffused through North America. It is a beautiful and symmetrical tree, the branches forming a pyramid at the summit. It rises to a height

of fifty or sixty feet, having a diameter of about eighteen inches. The leaves are rather short, of a bright green color, and united in pairs. The cones are oval, armed with fine spines, and of very small size. The concentric or annual circles of the wood are six times as numerous in a given space as those of Pitch Pine. The heart is fine grained and moderately resinous, which renders the wood compact, without great weight. Long experience has proved its excellence and durability. The Long Leaved Pine (Pinus Australis), is known as the Yellow Pitch, Broom and Georgia Pine. It is diffused through the States of Virginia, the Carolinas, Georgia and Florida, occupying dry sandy soils, called Pine barrens. The mean height which it attains is about sixty feet, with a uniform diameter of eighteen inches, for two-thirds of its length. The leaves are a foot long, of a beautiful green color. The cones are also very large, being seven to eight inches long, and four inches thick when open. They are armed with retorted spines, and the seeds are in general very abundant. The kernel is of an agreeable taste, and is voraciously eaten by "wild turkeys," squirrels, and the swine that live almost wholly in the woods. In some unfruitful years, whole Forests of hundreds of miles in extent will not yield a single cone. This latter fact may explain the phenomena, to some extent, attending the visit of wild turkeys and other migratory animals to the Western parts of this Province. The wood of the Pinus Australis is compact, fine grained, durable, and susceptible of receiving a fine polish, advantages which give it a preference over every other species. Those qualities are much influenced and modified by the nature of the soil. It is from this tree that the principal supply of Pitch, Resin and Turpentine is obtained.

The Pitch Pine (Pinus Rigida), is common throughout the United States, but is most abundant on the Atlantic Coast. It is a very branchy tree, and the wood is consequently knotty. It is very Resinous and affords a large quantity of Pitch. The bark is thick, of a dark colour and deeply furrowed. The concentric circles of the wood are far asunder; and three-fourths of the larger stocks consist of sap. On high ground and light gravelly soils, the wood is heavy and full of Resin; on low, humid soils it is the reverse, and unfit for use.

The White Pine, Weymouth Pine, or in Botanical language, the Pinus Strobus, one of our most important Forest trees, and from which our Staple Trade is drawn, is a native of North

America, is the most valuable and interesting of the species, and attains its greatest physical development in Canada. Its name is derived from the perfect whiteness of its wood when freshly exposed. The leaves are five-fold, four inches in length, numerous, slender, and of a bluish green colour. The cones are four or five inches long, and composed of thin, smooth scales, rounded at the base. It grows extensively between the parallels of 43° and 47° North Latitude, in almost all varieties of soil, but it attains its greatest dimensions North of the St. Lawrence, principally in the Ottawa Valley.

This ancient and majestic inhabitant of the British North American Colonies is still the loftiest and most valuable of their productions; and its summits are seen at an immense distance, aspiring towards heaven, far above the heads of the surrounding trees.

The trunk is simple for two-thirds or three-fourths of its height, and the limbs are short and verticellate, or disposed in stages one above the other to the top of the tree, which is formed by three or four upright branches. On young stocks, not exceeding forty feet in height, the bark of the trunk and branches is smooth and polished. As the tree advances in age it splits and becomes rugged, but does not fall in scales like that of other Pines. The trunk also tapers and lessens from the base to the summit more than those of the others of the same tribe. The wood is soft, light, free from knots, easily wrought, and very durable when exposed to the air and sun. This tree is the foremost in taking possession of barren districts, and the most hardy in resisting the impetuous gales of the Ocean. The wood is not resinous enough to furnish turpentine for commerce, nor would the labor of extracting it be easy, since it occupies tracts separate from each other, and is mixed in different proportions with other trees.

The White, Black and Red Spruces, or Abies Alba; Abies Nigra, and Abies Rubra belong to another genera of the Pines called Firs or Abies. They differ from the Pines in the form and position of their leaves, as well as in the general aspect of the trees. In the Firs, the leaves are generally shorter than in the Pines, and placed solitarily instead of in pairs. The varieties enumerated are natives of America, and nearly resemble in their general properties those of Europe. The Black Spruce is reckoned the most durable. In America it is used for knees for ship building, when neither Oak or Tamarac can be obtained. The Timber of the Red Spruce is universally preferred throughout the States

for sail-yards, and imported for that purpose from Nova Scotia. It is chiefly from the decoction in water of young shoots of the Black Spruce, and not exclusively from those of the White species, that Spruce Beer is prepared, by fermentation with sugar or molasses. The Essence of Spruce, of the dealers, is prepared by evaporating the decoction to the consistence of honey.

The Silver Fir (Abies Picea) is one of the most beautiful of this family. When standing alone and developing itself naturally, its branches which are numerous, and thickly garnished with leaves, diminish as they approach the top, and thus form a pyramid of perfect regularity. The upper surface of the leaves is of a beautiful vivid green; their under surface has two white lines running lengthwise, on each side of the mid rib, giving the leaves that silvery look from whence the common name is derived. The cones are nearly cylindrical, about eight inches long, and always directed upwards. The wood is light, slightly resinous, and inferior to that of the common Pine. The resin of this tree is sold in England and America, under the name of Balsam, or *Balm of Gilead*, although the true Balm of Gilead is procured from a totally different tree, the *Amyris Gileadensis*.

The Norway Spruce Fir (Abies Communis), is a beautiful and stately tree. The branches are verticillate, and spring from a common centre. The leaves are solitary, short, slightly arched, and acute, of a dark green colour, which gives to the tree a sombre aspect. The cones are cylindrical, five to six inches in length, and contain small winged seeds, which ripen in November. This is one of the tallest of the European Firs, with a very straight but not thick trunk. It is a native of the North of Germany and Russia, and particularly abundant in Norway, from whence it is largely imported into England, both as Spars, and as the White Deals of that country and the Baltic. The Timber is inferior to that of common Pine in durability, but is more prized than any other variety of Pine as Masts or Spars for small craft.

Between the banks of the Columbia, and the Rocky Mountains, a recently discovered species of Pine commands attention. It is called the Pinus Douglasis; grows to a height of two hundred and thirty feet, and is upwards of fifty feet in circumference at the base. It has a rough corky bark, from one to twelve inches thick. The leaves resemble those of the Spruce, and the cones are small. This Timber is of good quality, and very heavy.

In that wonderful gold region of California, where nature has

exhibited her powers on so large a scale, the products of the Forest appear to keep pace with those of the Mine. The Pinus Lambertina is a native of Northern California, where it is dispersed over large tracts of country, but does not form dense Forests like most other Pines. It is a very majestic tree, and generally rises to a height of 250 feet, measuring often fifty-eight feet in circumference, at three feet from the root, and eighteen feet at one hundred and forty feet from the ground. The trunk is straight, clean, and free from branches, for about two-thirds of its height. The bark is uncommonly smooth, and the whole tree has a most graceful appearance. The cones resemble those of the Weymouth Pine, but are much larger, being on an average at least sixteen inches in length. The tree bears a considerable resemblance to the Spruces. But even this great mammoth of the Forest is eclipsed by another member of the same family, found in the same country, and called impressively Pinus Grandis. Specimens of this tree have been met with over one hundred and fifty feet in circumference, and supposed to be over 500 feet in height.

The Larch (Larix Communis), is after the common Pine, probably the most valuable of the tribe. The name is derived from the Celtic Lar, Fat—in allusion to the resinous juice which it exudes. It is an exceedingly useful Timber, and is a native of the Tyrolese and Dalmatian Alps.

The Black Larch of America (Larix Pendula), called by the Indians Tamarack or Hackmatack, is a beautiful tree, resembling the European species both in appearance and in the excellent quality of the wood and bark. The Cedar of Lebanon (Larix Cedris), is a native of the coldest parts of the Mountains of Lebanus, Amanus and Taurus, but it is not now to be found in any quantity in those situations. The Forest of Lebanon seems never to have recovered the havoc made by Solomon's hewers, so that there are now probably more Cedars in England than in Palestine. This tree, if the rapidity of its growth were at all correspondent with its other qualities, would be the most valuable in the Forest. Its resistance to absolute wear is not indeed equal to that of the Oak, but it is so bitter that no insect will touch it, and it seems to be proof against Time itself. We are told the Timber in the Temple of Apollo at Utica was found undecayed after a lapse of 2,000 years, and that a beam from the Oratory of Diana, at Saguntum in Spain, was carried from Zante, two centuries before the Trojan War. Some of the most celebrated structures of

antiquity were formed from this tree. It occupied a principal place in the construction of the great temple of Jerusalem, and furnished the prototype of the trade which we carry on from this country during the present period of the world's history. The ships of Sesostris, the Egyptian conqueror, one of them 280 cubits long, were formed of this Timber, as was also the gigantic statue of Dianna, in the Temple of Ephesus. Some difficulty no doubt exists with regard to the ancient history of this celebrated tree, there being other trees still named Cedars which, though somewhat resembling them, do not belong to the same genus--as the White Cedar, which is a Cypress, and the Red, which is a Juniper.

The Yew Tree (Taxus Barcata), is a tree of no little celebrity, both in the military history and the superstition of England. It is a native of Europe, North America, and the Japanese Isles.

The Cypress (Cupressis Sempervirens), obtains its name from the island of Cypress, where it grows in great abundance. It is supposed to be the most durable of all Timber, excelling even the Cedar in this quality. The doors of St. Peter's Church at Rome, which had been formed of this material in the time of Constantine, showed no sign of decay, when, after the lapse of eleven hundred years, Pope Eugenius IV. took them down to replace them by gates of brass. In order to preserve the remains of their heroes, the Athenians buried them in coffins of Cypress, and the chests or coffins in which the Egyptian mummies are found are usually of the same material.

The White Cedar (Alba Cupressis), is a native of America, where it grows to a considerable size, but it grows slowly, being eighty years old before it is fit for Timber; and even then, though it answers well for heops, small boats, roofing and some other purposes, it does not appear very worthy of cultivation as a Timber tree.

Arbor Vitae (Thuja Occidentalis), or Canadian Cedar. The wood of this tree, which gives out, when burned, an agreeable odour, was used by the ancients at their sacrifices; and hence the name, from the Greek word Thuo, to sacrifice.

The common Arbor Vitæ is a well known tree, and indigenous in Canada. The wood is considered more durable than any other. The Chinese species, Thuja Orientalis, very nearly resembles the American tree.

Norfolk Island Pine (Araucaria Excelsa), is a splendid tree, often attaining a height of 220 feet. It is a native of Australia,

and presents a magnificent object, with its bright evergreen foliage and innumerable waving branches. The leaves are closely imbricated, inflexed and pointless. The longitudinal sections of the wood, with all the distinctive marks of Coniferæ, exhibits the peculiarity of three rows of oval disks. From this circumstance, it has been identified as the same species with the famous fossil tree of Craigleith quarry, so familiar to all readers of Lyell's Principles of Geology.

The Araucaria Imbricata is another variety of this species, being more hardy, and found in colder countries.

The Juniper (Juniperus Communis), is a tufted shrub common to Europe and America; it is found in Asia. It is chiefly remarkable for its berries, and their use in the manufacture of gin.

The Red Cedar (Juniperus Virginiana), is found in Canada, but flourishes as one of the highest Timber trees in Jamaica. It is not found in large quantities in this country, and its dimensions hardly warrant its being classed as a tree. The beauty of the wood, its high perfume, and freedom from insects, makes it valuable as an economical product, wherever it can be found.

It will be seen from this enumeration that the Pine family hold a principal place amongst the economical productions of the Forest, both of the commerce of the world in ancient and modern times, and although some varieties may have been more in demand than others, at various periods of the world's history, still the wants of mankind and the progress of discovery in the arts and sciences will undoubtedly bring sooner or later, the varieties least thought of now, into the market. At present, the variety known as the Pinus Strobus or White Pine, occupies the chief position in the Timber trade of the civilized world, and it is destined, from the vast extent covered by its Forests, to maintain that proud pre-eminence for a considerable period. As stated, its greatest development as a Forest tree, is North of the St. Lawrence; and the Valley of the Ottawa River the country where it is most profusely distributed. Its commercial history may be correctly said to be co-eval with the settlement of the country where it is found. Previous to the close of the last century, the Ottawa River was only known to those adventurous Voyageurs who following the old highway of the Aboriginal inhabitants, and the track of the adventurous explorer Samuel Champlain, brought the few bundles of Peltry, which then represented the Staple Trade of the Canadas, to the frontier town of Montreal. It was no exaggerated statement

made to Louis XV., by his obsequious courtiers, that the loss of these Provinces was only the loss of a few acres of snow, which cost more to maintain than they were worth. Nor was it so senseless a sneer as most people imagine, when they charge that elegant cynic Horace Walpole, with th pithy exclamation that England and France were at war for a few bundles of Furs. Both expressions were strictly correct. It is matter of astonishment now, that France put forth such efforts to retain so unprofitable a colony, and that those efforts did not result in any conviction of its value, to the mother country, in the minds of those politicians who then guided her destinies, is abundantly evident from the fact that no precaution had been taken to avert what must have been long known as an inevitable catastrophe, or since to recover what would have been a valuable dependency. To the superficial observer of the politics of Europe, in 1760, nothing could be more absurd than the contest between two great powers, carried on with circumstances of atrocious barbarity, for the possession of a country only capable of furnishing loading for a couple of annual ships, and whose whole trade did not amount to greater tonnage than what is now employed by the Hudson's Bay Company. And it is hard to say whether any of the English statesmen who planned the conquest of Canada, if they could have foreseen the events following thereon, would have meddled with a measure so destructive to the peace of the world. It is a matter of congratulation to us that as we stand now in the same relative position to the people of the late United States as the French stood in 1750, we have the protective arm of a Power stretched over us, whose duty has always been well and effectually done to her own Colonies. The close of the Revolutionary War compelled a goodly number of those brave and gallant hearts who could not foreswear their allegiance to follow the fortunes of the standard whose cause they had fought to uphold, and to settle in the then wilds of Canada, under the ægis of those laws and that form of Government which they had been taught to love and reverence. The associations or connexions left in the country they had abandoned soon opened an intercourse with the exiles. Trade, or purposes of speculation, enticed many an enterprising Massachusetts Trader across the boundaries which their successful revolt had raised between the American Provinces of Great Britain, and to one of those active individuals the Lumber Trade of this Province owes its existence. Some time about the year 1790, a Mr. Wright, a native of Woburn in Mas-

sachusetts, visited Montreal, then consisting of a single street, and possibly five thousand inhabitants, for commercial purposes. While there, he became acquainted with a party who represented himself as the holder of a Patent for a large quantity of land on the Ottawa River, which he was prepared to dispose of on reasonable terms. After some consideration, Mr. Wright became the purchaser under this Patent, but on inquiry, found the document to be a forgery. The then Governor of the Province, willing to encourage immigration proposed to Mr. Wright that he should settle on the lands nevertheless, and that such arrangements should be made as would enable him to acquire the property under reasonable conditions. Accordingly, Mr. Wright made the necessary preparations, and some short time before the close of the century, made the first settlement on the Ottawa, near where the village of Hull now stands. With our present facilities for travel we cannot realize, even in imagination, the hardships endured by those early settlers; the weary canoe and boat voyages, the frequent portages, the doubtful character of the Indians, for it will be recollected that scarcely thirty years had elapsed since the time when the daring and astute Indian Chief Pontiac had banded the hostile tribes of Aborigines against British Power, and had all but annihilated it, with every circumstance of savage barbarity attendant on Indian warfare in Canada. Then came the losses by fire, that scourge of the early settler, and the discouragement consequent on short and scanty crops; but through all these the energy, skill and strong will of the founder carried him triumphantly. The events of the War of the French Revolution had shaken society in Europe to its centre, and not only overturned Established Religion and Government, but also thoroughly revolutionized commerce. The Baltic, and the countries bordering thereon, were closed to English merchandise. Already the want of timber and hemp began to be felt by the chief Naval Power of the world, and at this point the almost forgotten and obscure colony stepped forward, to help the country which had acquired possession thereof by right of conquest. The hour and the occasion had arrived, and the man was there, to take advantage of both. It is probable that Mr. Wright, in his many trips to Montreal and Quebec must have been made aware of the increasing demand for Timber, and for its scarcely less important (in the then state of naval affairs,) adjunct, hemp. At all events, he set himself diligently to supply both. His success with the latter necessarily terminated with the general Peace

in 1815, but the trade created by his enterprise in the former, has been still increasing, and is the basis on which the commercial prosperity of Canada is established.

If great events are to be marked as the epochs on which the history of a country is founded, Canada has already *Three* remarkable periods to chronicle. The first is her early settlement, the second her transfer to Great Britain, and the third the commencement of the Lumber Trade. Previous to the development of that traffic, the condition of this Province was miserable in the extreme. Without trade, without manufactures, its agricultural products were not more than the scanty population could consume; and it is within the memory of people still living, that the provisions for the troops quartered in this Province, were actually imported from England. Nor is the time so far distant when the battles of rival Fur Traders were productive of more real bloodshed than those of the people and nation beyond our frontier, and equally without the control of the Executive Government. The enterprise that brought the first raft from the Forests of the Ottawa has changed all this, and metamorphosed the country from being the haunts of savage beasts, and scarcely less savage men, into a hive of industry and enterprise, with a rapidly developing commerce, and a corresponding manufacturing interest. When the short time in which this change has been brought about is taken into account, some astonishment will no doubt be manifested, but the value of the agent will be thereby considerably enhanced.

The dawn of the 11th of June, 1806, saw the village of Hull alive with excitement, while the cliffs opposite, on which the Legislative Palaces are now built, and the whole site of the capital of Canada, reposed beneath its dark fringe of Pine and Cedars, untouched by the hand of man. A great event in the history of that little isolated community was to come off, and if the veil of futurity could be pierced, a great event in the history of the Province. The *first Raft* ever floated down the Ottawa, rode at its moorings in the mouth of the great tributary, the Gatineau, and it was the event of seeing it get under way for its adventurous voyage, that caused this excitement amongst the quiet villagers. More than this, it may be supposed that many anxious hearts marked its departure; for the mysteries of the great river; its eddies, rapids and cascades were as yet imperfectly known, but the venture was successful, and before nine years had elapsed, the Lumber Trade of the Ottawa was an established fact. There are many gentle-

men now connected with this Trade, whose experience dates from the period mentioned; and most of those engaged therein have been personally acquainted with its founder, the late Col. Wright. From the 11th of June, 1806, till the first legal recognition of this Trade, during the Administration of the Earl Dalhousie, in 1823, by the imposition of a Timber Duty on Exportation, there are now no authentic records. The valuable papers belonging to the Wright family, in connexion with this Trade, are of too personal and private a character, to warrant their publication for many years to come; but it is to be hoped that those in whose hands they remain will preserve them carefully, so that the future historian may not be at a loss for facts of such importance as those papers contain. Between the commencement of this Trade and its first recognition as a fiscal element, during a period of sixteen years, a good many adventurous spirits crowded into it. Many lawless acts were committed, and the strong arm of might was often more freely invoked than the requirements of justice demanded. The manufactures connected with the Trade were then in their infancy, and the mode of constructing a raft so rude, as to astonish the navigator on the comparatively mechanical construction of the present day. When it is understood that the mooring apparatus, which is now as complicated and modernised as in a goodly merchant ship of 600 tons burthen, was then represented by wooden anchors and withe cables, some idea may be formed of the difficulties attending the navigation to Quebec; and the total absence of any propelling power, beyond that arising from the currents, the winds, and the arms and oars of the raft's crew, will explain the reason why two seasons were frequently consumed in a trip which is now generally made in four weeks, and it is now no extraordinary occurrence to have the rafts from Lake Temiscamingue, at Quebec early in July, having traversed a distance of 600 miles, from the last days of April. The wooden anchors spoken of as used in the early days of the Lumber Trade, were made of Oak, shaped something in the form of a grappling iron, with large chain withes passed through the different forks, encircling a stone of such dimensions as was deemed sufficient to answer the purpose, and could be handled. This stone was secured within the forks and the chain withes, by interweaving other smaller withes of sufficient dimensions to secure the same, thus continuing until connecting with the main withe cable; and it is affirmed, that they answered every purpose to the rafts of those early times,

that their more durable and powerful successors now serve. The next great event in the history of the Staple Trade was the erection of slides at and above Ottawa. When the Lumber operations extended above the city, in the early period of the history of this Trade, the mode by which the great Falls of the Chaudiere were passed was by floating the Pine Timber, at high water, down through the little Chaudiere, on the South side of the Ottawa, until entering the large bay at Le Breton's Flat above the Chaudiere Falls; from thence the cribs were towed by a rope and snubbed round a small eddy, until thrown into the current of water leadiug to the Southern edge of the Chaudiere Falls. Without this precaution, two-thirds of the Timber would have taken the direction of the lost channel, passing over the Falls into the great cavern near the Victoria Foundry, from whence it could not have been removed, until low water, and only then with great extra expense. Pine cribs thus passing the Falls were broken up, the detached pieces being caught by a boom, extended from the lower end of Victoria Island to the main shore, and re-rafted for the Quebec market. All cribs of heavy floating Timber, and Staves, that could not be secured by the boom, were broken up in the bay above the Falls, drawn past by oxen, etc., and re-rafted. When in low water, this channel was impassible, the cribs were run over the little Chaudiere, through the Mast channel, falling down with the current, until passing the reef extending from the Island above the Kettle, thence rounding the said reef, were made fast to the Island, where two men with a birch canoe, could place the crib in the best position to pass through the Big Kettle, returning with the canoe for another, and so on, until the whole raft was passed. At this pitch of water it was necessary to boom the Ottawa River from the point at the Hull Landing, to the point above the present steamboat wharf, Ottawa, where they re-rafted for Quebec market. These facilities for trade were the invention of the present Ruggles Wright, Esq., of that Village, the son of the founder of the Trade, and were the first ever built to facilitate the descent of Cribs. In Switzerland and Sweden, single stick slides had existed for a long time, but the construction of one of sufficient capacity to carry through a Crib, was reserved for the development of a trade of corresponding magnitude. The first of those slides was constructed by Mr. Wright, in the year 1829, and another by the late George Buchanan, Esq., on the South side of the Ottawa, where the Government slides

now stand, in the year 1832. The slides at the Chats were built in the same order by the same parties; Wright's, which were very little used, in 1845, and Buchanan's, now Government property, in the same year. Those at the Calumet were constructed in 1845, and those at Des Joachim still later. Another important event in the management of the trade was the substitution of the present system of letting Timber Berths. Previous to 1850, the method obtained was to grant a License for whatever quantity of Land was applied for, the Limit holder being simply charged a duty on the Timber brought to market. After that period, a Ground Rent of two shillings and sixpence per acre, was charged additional, with a proviso to prevent monopoly, of having the aforesaid rent increase in geometrical proportion, each year that the Limits were unoccupied. It is held by those best acquainted with the trade, that this regulation has the effect of stimulating over production. The establishment of a Supervisor's Office, by which the Lumber coming to Quebec could be measured and culled, occurred in 1847. Both this measure, and that of the Limit system, as it now stands, are due to the exertions of the inventor of the slides. The next important regulation connected with the trade, was promulgated in 1859, by the famous *en bloc* Ordinance, which threatens its ultimate extinction. Such is the brief history of the rise and progress of a traffic of vast importance to the interests of this Province, and its bearings on the fiscal, commercial, and manufacturing interests thereof, will be conceded without question.

Of the other portions of the Province which furnish a supply of Timber for European markets, the principal, are the Saguenay, the St. Maurice, and the Trent Valleys, but it is limited in quantity, and will never attain the dimensions of the trade of the Ottawa.

The commercial importance of Canada may be dated from the day on which the first raft descended the Ottawa River; and its manufacturing pre-eminence will be attained when the first vessel ascends that stream to carry the produce of its Forests to Quebec. A mighty revolution in the commerce of Canada has been effected by the development of this trade, and it is destined to produce one of still greater magnitude.

The Lumber Trade of Canada is its only available staple, and is drawn principally from those Districts referred to. Commencing with that of the Saguenay, it occupies an area of 27,000 square miles along the valley of that River, which is navigable for large ships for a distance of 75 miles from its junction with the St.

Lawrence. It furnishes several thousand tons of sawed Lumber yearly, and employs a number of square-rigged vessels. Next in point of size, is the St. Maurice territory; its area is about 21,000 superficial miles, and it is said to contain a vast supply of Timber. The trade on the St. Maurice is limited to the production of sawn Lumber and saw logs. The country drained by the Trent, and its tributaries, does not exceed 6,000 square miles of area, and its supply of square timber has not much exceeded 2,000,000 cubic ft. per annum. From settlement, and other causes, this latter district will soon be worked out, so that as an element of production, as far as the great Staple Trade is concerned, it is not of as much importance as the St. Maurice or Saguenay. The area drained by the Ottawa River and its tributaries, is about 77,000 superficial miles. Of this vast space, probably 11,000 miles are under the influence of settlement, and of the remaining 66,000 miles, 11,500 more are occupied by the manufacturers of Lumber; consequently, there yet remains 54,500 square miles of territory, of which very little is known. To this must be added some 7,000 square miles between the Western waters of the Ottawa and the Georgian Bay, and 4,000 square miles for the space in continuation thereof, to the North of French River, and there is a total available area of 65,500 square miles, from which the future Staple Trade of this Province must be drawn. Of this immense area, probably one-fourth, or 17,000 square miles is good arable land, the remainder eminently adapted for Forest purposes, is rich also in mineral wealth, and if judiciously developed, cannot fail to supply to this Province its natural deficiencies in mineral fuel, and to create a manufacturing interest which shall take the chief rank on the American continent. The vast extent of country covered by those Pine Forests, from which the Staple Trade of Canada is drawn, is pierced in every direction by what may not inaptly be called a network of water ways. The tributaries of the Ottawa, most of them considerable rivers, are very numerous, and derived, as they are said to be, from a system of waters connecting Lake St. John, the head waters of the Saguenay, on the North East, including those of the St. Maurice, and terminating in the sources of the Ottawa on the North West. Thus the country to the North of the River is one large island, or rather a series of islands, pierced in every direction by streams of considerable magnitude, some of them over 300 miles in length; while the South presents the extraordinary spectacle of a series of streams running parallel to the

main River, from their sources, which in some cases is over 180 miles, to within a short distance of the point of junction, where they generally make a sharp turn to the North, and join the Ottawa at right angles to its course. As a general rule, the Physical aspect of the country, so situated, is in strict accordance with the conditions necessary for the development of its system of internal waters. On the North side of the River, the numerous tributaries find their way through the spurs of the Apalachian chain of mountains, and take their rise in a curious depression between the skirts of those spurs and the water shed of the Hudson's Bay Territory. Such of them as have been explored to their true source, show that the space dividing the water system of the Ottawa Valley, and those streams which run into the Arctic Ocean, is of very small extent; indeed in one instance, they approach so closely that the Hudson's Bay Company have carried their supplies for the Forts about Temiscamingue from York Factory, up some of the streams falling into James' Bay, and down the head waters of the Ottawa. As a consequence of all this, the country is rugged and broken in the extreme, alternating between fertile valleys, bare and sterile hill tops, barren sands, and beautiful level meadows; the latter generally of small extent, and rather rare occurrence. On the South side, the character of the country is essentially different, except towards the sources of the principal streams, its general characteristics are those belonging to a comparatively level country; the soil in many cases rich and fruitful in others light, again rocky, sandy and barren. On the whole, there is much more arable land on the South side of the river, in proportion to its area, than on the North. Its geological character may be described on the North as belonging almost wholly to the Syenitic formation; while on the South the Trenton Limestone prevails to the dividing summit between the Ottawa water system and Lake Huron. A curious fact connected with its physical geography, and one which will exercise no ordinary influence on the future development of its trade, is the navigable character of its streams, and the small elevation of the ridges which divide them from the navigable waters falling into Lake Huron and James' Bay.

Such is the country from which the Staple Trade of Canada is drawn, and the mode in which it is produced is well worthy the attention of the people of this Province, because, on its successful prosecution, the future prosperity, commercially and in a manu-

facturing point of view, of those people depends. As the whole trade is under the direction of the Governor General and Executive Council, the power to cut Timber on waste lands of the Crown must be sought by application through a series of routine—not at all times clearly defined. Of this system, and its consequences, due notice shall be taken, when the political bearings of the trade come to be considered. At present, it is enough to assume that the Lumber Manufacturer has procured his License, which generally covers from 50 to 100 square miles of territory. The next proceeding is to send men to the Limit, under an experienced foreman, whose duty it is to clear sufficient land for a farm capable of yielding oats, potatoes and hay, for the necessary establishment, which will consist of probably twenty horses, ten or twelve oxen. and, if carried on with proper economy, a corresponding number of other cattle, for the supply of fresh beef and general farm purposes. The building of the necessary *chantiers* is also a work of considerable labour ; those constructions being often sixty feet in length, by thirty feet in width, built of trunks of trees, notched together at the corners, and roofed with wooden scoops, in the form of the letter C, two laid side by side, on the back of the letter as it were, with the opening upwards ; and the opening of the third placed over the junction of the edges, so as to give the whole the external appearance of those corrugated tiled roofs, so common in English cottages. A large opening is generally left in the top, for the escape of the smoke, around which is built a wooden, or in some cases, a clay chimney stack. The inmates are berthed in bunks or shelves, along the walls, tier over tier, and a more jolly, merry set never gathered round the enormous fires which are kept up without intermission. There may be three or four of those *chantiers* within one Limit, the number depending, in a great measure, on the quantity of Timber to be got out. The staff of every *chantier* is represented by the cook, a most indispensable personage, a clerk, and the *bos*, or foreman. The duties of each of those functionaries is suggested by their official titles, but a great deal of responsibility is thrown upon the cook. His knowledge of his duty, or the want of it, may result in great advantage to his employer, or disastrous loss. This will be understood, when it is known that a barrel of pork worth $18 at Ottawa, is full value for $30 at the mouth of the Matawan, 190 miles above that city.

Having built the principal *chantier*, and the necessary stables of the establishmennt, the next duty is to prospect for the Timber

necessary to employ the men, during the incoming season.

White Pine does not grow in one dense and interminable Forest, over the whole locality where it is to be found—it grows in detached groves, frequently of a few trees, and again, composed of many hundreds; neither in the groves where it is to be found, are all the trees capable of being converted into what is known as marketable Timber. What is understood by the latter term may be taken in a general sense, as designating straight, clean Pine, free from knots, that will square twelve inches for forty-five feet of its length; and it is to be particularly noticed, that this splendid Timber must be hewed to a perfect face, and sharp edge throughout.

When the necessary quantity has been prospected, (an operation by the way, requiring much skill, and correct local knowledge) the next operation is to improve whatever stream may be leading from the Limits to the main river, to cut roads from the different groves to the nearest streams, where the Timber may be floated out in Spring; to bridge, improve, and otherwise render available, the natural features of the locality where the operations may be carried on. This laborious operation is necessarily attended with great expense, frequently ranging from £500 to £5,000, before a stick of Timber can be taken off the Limit. Having completed these necessary preliminaries, which frequently include the building of two or three subordinate *chantiers;* the work of felling, hewing, and preparing the Timber for the Spring operations are commenced. Each gang is divided into hewers, liners, scorers, horse and ox teamsters. The scorers fell the Timber marked out by the foreman; the liners direct and perform the first operation of squaring the prostrate giant of the Forest. The scorers having reduced the tree to the rough square block, to be perfected by the craftsmen of the trade—the hewers—with the broad axe, who reduce the surface of the scored sides to as true and level an uniformity as if they were planed. The duty of the scorers is to cut checks in the tree, as deep as the lines, at intervals of two to thirteen feet apart. These checks are like the letter V, and are generally performed by a few blows of the axe, in the direction of the diameter of the tree; three or four longitudinal strokes being sufficient to detach the block between any two spaces. It is by no means uncommon wages for a good hewer to receive $30 to $50 per month, with rations; a liner, $20 to $25; and a scorer, $18 to $22. The teamsters are men generally constantly employed

by the manufacturers, and their wages are fully as high as the scorers. A cook is often engaged at $32 per month. Having squared and pointed both ends of the sticks of Timber, it is now ready to be removed to the roll-ways, a platform in some convenient open space, where the Timber can be laid up, free from the chance of being covered with snow, and where it will be conveniently placed for drawing out on the ice, in the months of January, February and March. In this operation of laying up Timber, as it is technically called, much damage is done to the young Timber by having it cut down for bedding pieces, and other inferior purposes—but as this is clearly the fault of the tenure under which the Limits are held, it shall be considered when the management of our public Forests are described. After having delivered the Timber on the ice, if the limits are near enough to the Ottawa River, and the sticks placed on its surface, the operation of rafting is commenced, as soon as the ice begins to break. It consists of placing the best and straightest pieces of Timber side by side, between two pieces of Pine, generally fifteen or sixteen inches in diameter, and of the full length of the pieces destined to form the crib. These side pieces are about twenty-two feet apart, and are connected by traverses, securely pegged down to them at intervals of six or eight feet apart, forming on the whole a raft of twenty-four feet in width, and forty to sixty feet long. As no attachments whatever are fixed in the Squared Pine, the tendency of those pieces forming the body of the crib, to rise and throw the whole structure out of water, is counterbalanced by placing loading pieces, as they are called, across the traverses, so that the additional weight keeps the crib in equilibrium. The Timber is not confined at the ends, and in the descent of rapids or slides, it is no uncommon thing to see the bottom pieces gracefully decline keeping company any longer with the crew, or loading sticks, and illustrating the story of the renowned Robin Hood, and the Friar of Fountindale, by intimating "Now take thy chance my fine fel-"low, I'll carry thee no more; either to the bottom sink, or safely "swim ashore." If the Timber has to be hauled out on any of the tributaries, it is merely placed in such a position as will enable it to be floated off with the first Spring freshet, and then commences what may truly be said to be the exciting time of the Lumber Manufacturer's life. In some few cases, valuable Timber has been left in the beds of the smaller streams, from want of sufficient rain, or sufficient skill to take advantage of the hydraulic power at com-

mand; but the larger ones more commonly suffer under a plethora of that element, than a scarcity. This is the case especially on the South side, where from the rising of the waters, and the very injudicious manner in which bridges have been thrown across some of the principal rivers, the Lumber producers were obliged to destroy those structures. From the paucity of settlement, this has not occurred on the North side. The operation of driving is fatiguing, dangerous, and unpleasant in the extreme. With waters of an icy temperature, and constant immersion therein, from the first gleams of a cold April or May day, to the last fading hours of night, with the desperate and dangerous service of freeing jams—the life of a raftsman is by no means as pleasant at it would appear to a superficial observer. At some of the unimproved parts of the River, these jams are fearful drawbacks to the trade. A stick swinging on a rock may be caught by the next in descent, and hoisted up, so as to form as it were, a *point d'appui*, from which a mass of Timber, interlaced in every possible form, and elevated by the hydraulic power which itself helps to create, is raised to obstruct the descent of the remainder. This mass is generally held by one or two sticks, and the service of danger in chopping those in pieces has cost more than one gallant fellow his life. To facilitate the descent of those streams, men must be stationed at those points where the eddies of the current, or natural obstructions are likely to retain the Timber, and their duty is to keep it free, by forcing every separate stick which touches, off the shallows or banks, and keeping them in the current. Large booms are constructed at the mouth of each river, in which the Timber is caught, identified by its owner's peculiar marks, and rafted in the manner before described. Some of the tributaries have works erected on them by Government, but most of them owe their efficiency to private enterprise. Each raft consists of 70 or 80 cribs, and contains from 75,000 to 100,000 cubic feet of Timber, exclusive of the floats and traverses.

From the mouth of the Matawan to the foot of Des Joachim Rapids, the rafts have to be broken into cribs and re-rafted; at Deux River, Rocher Capitaine, and at the Slides at Des Joachim; below that at the Allumette, where they run bands, and at Paquette's Rapids, Calumet Slides, including Portage du Fort, Chats, Chaudiere, at this city, at the Long Sault, at Grenville, and through the Little River. From Portage du Fort downwards to the head of Isle Jesus, they enjoy the benefit of steam

power, as a means of propulsion, and this privilege is also obtained between Des Joachim and the head of the Des Allumette Rapids. From the foot of the Boute de L'Isle to Quebec, the rafts are towed by tug steamers, and considerable loss is sometimes sustained in this part of the route by storms, especially in Lake St. Peter. This Lake was famous, in the early history of the trade, for the loss and damage sustained thereon, and has furnished a subject for the pencil of more than one landscape painter.

The rafts generally begin to reach the city of Ottawa towards the middle of the month of May, and the last is usually down before the middle of September.

On the arrival of this Timber at Quebec, it is put into booms, for the purposes of inspection and sale. If sold, it is generally disposed of as measured off in the raft, or subject to closer scrutiny, by which all culls are returned to the manufacturer. The inspection and survey, as the measurement is called, are generally performed by the officers of the Supervisor of Cullers, a Government establishment, especially provided for this purpose. It is then shipped and stowed by men called Stevedores, who make a profession of this business, and sometimes band together to compel extravagant wages. The vessels principally in the trade are barques of six to seven hundred tons register, and will generally stow 750 to 960 tons of Timber. The average voyage out and in, occupy eight to twelve weeks, and the loss of life or property are by no means such as to warrant the high rate of Insurance charges on this navigation. In preparing the Timber for shipping, a loss of fully four per cent. of the whole material is suffered, from the necessity for butting, or cutting off the ends which become partially damaged by the descent of the various rapids; and, on very many occasions, a further loss is experienced, by the necessity for re-hewing a portion of the Timber which has sustained injury in its descent. This explains the reason why the pieces are pointed at the ends, which is necessary to prevent abrasion or splintering. The people of Quebec benefit to some extent by these operations, but far the greater part is allowed to encumber the bottom of the noble harbour, and its various coves, to the serious detriment of its uses as anchorage ground.

During the last season, the Ottawa country furnished 13,784,977 cubic feet of White Pine; 2,632,938 cubic feet of Red Pine, and 239,213 cubic feet of other Timber, principally Oak, Tamarack, &c. It also furnished 219,534 standard saw logs, at 28 cubic ft.

to the log, making 6,136,952 cubic feet, or a total of 23,794,080 cubic feet.

The raftsmen are a hardy and orderly class, composed in a great measure of French Canadians, Irish and Scotchmen—well paid and well fed. From their knowledge of wood craft, they would form a most efficient army corps, if ever the country should need their services. Their provisions consist of pork, bread, potatoes, beef, tea, and molasses,—without stint. Large quantities of pease are also consumed in the manufacture of that standing dish in all *chantiers*—pea soup. The order of the day is rude, plenty, and unrestrained hospitality. As a class, there is no portion of the community who live as well or fare better. The foregoing description applies only to the manufacturers of Squared Timber. There is yet another class whose enterprise and energy has established the nucleus of that manufacturing power which is destined to transfer to Canadian hands the conversion of the raw material of the Western and Southern States into their respective manufactured products.

The manufacturers of Sawn Lumber, have, in addition to the outlays described, as requisite for the production of Squared Timber, the additional investment of the buildings and machinery, necessary to carry on their business. As regards the production of crude material, their expenses are not so great, because the only labour to be performed in their case is to cut the logs into such lengths as may be deemed advisable—in general twelve feet; and this circumstance renders less attention to their descent along the streams necessary, so that they are all collected within the booms at a certain time, it does not seem to matter in what order they arrive. Some of the parties engaged in this particular branch of the trade derive a good portion of their supplies from private sources; others are obliged to maintain expensive establishments, similar in every respect to those of the other branch of the trade, but, from the absence of liners and hewers, less expensive.

On the Ottawa and its tributaries, there are the manufacturing establishments of G.W. Usborne, at Portage du Fort; the mills of the late J. Egan, at the Chats; Messrs. Pattee, Perley & Co., Harris, Bronson & Co., Young & Co., Baldwin & Co., at the Chaudiere; and Messsrs. Currier, and McLaren & Co., at the Rideau, in this city. Also, the establishments of the Messrs. Gilmour & Co., on the Gatineau; Eaton & Co., on the Blanche; Thompson, Brothers, on the River Aux Lievre; and the Hawkesbury Mills, the property

of the Hon. John Hamilton, at Hawkesbury. These are all large establishments, employing a great number of hands every season, capable of manufacturing an immense amount of Lumber—and supplied with machinery of the most elaborate description.

Having described the Lumber trade, as far as its production and manufacture are concerned, it now remains to notice its peculiar value to this Province, and the contrast between the present condition of Canadian trade and the traffic carried on at the commencement of the present century.

The return of vessels entering at the Port of Quebec, in the year 1805, shows the number to be 146; of a freight capacity equal to 26,136 tons. In the year 1859, there arrived at the same Port, 970 vessels, manned by 17,046 men, and of a freight capacity equal to 510,984 tons; while there cleared from the same Port, 1,051 vessels, manned by 17,834 men, with a capacity of 539,135 tons —and the gross total to all Ports of the Province, Inland and Sea Ports, entered according to the Custom House Returns, was 17,417 vessels inwards, and 16,499 vessels outward bound; with a tonnage of 4,142,606 tons inwards, and 4,175,957 tons outward, making a grand total of 8,318,563 tons—difference of traffic in a little over half a century as astounding under ordinary circumstances, as any other of the wonderful changes brought about by the development of this trade. Compared with the trade of the Province in 1805, it is hardly possible to imagine any increase so remarkable. It is to be borne in mind that the whole trade at that period was our import trade, and that the number of vessels included Troop Ships and Ships of War. The average tonnage of each was only 172 tons, while the capacity of the vessels of the latter period averaged nearly 530 tons. The value of the exports in 1859 was $24,765,981; of the imports, $33,555,161, making a total of $58,322,142; on which a duty of $4,437,846.12 was levied. Of this sum, $9,663,962 was the produce of the Forest alone, and the value of the ships built at Quebec, $421,566. If to this is added, $487,231, the produce of manufactures induced by this Lumber trade, we have a total sum equal to $10,572,759. To this must be added the money left in the Province, for labour in loading the vessels engaged in this service, and the provisions supplied to the crews; and the allowance for full freight of the ships built in the Province; as well as the disbursements on tug steamers, barges, and other vessels engaged in this trade, with the United States, and there will be a total of

probably $2,000,000, to be added to the above sum, which will make it equal to $12,572,759; or over 21 per cent. of the whole trade of the Province, and more than one-half of the value of its exports. In 1805, the probable value of the whole trade of Canada would be $260,000.

In the year 1823, the first duty was levied on Timber in Canada; and it was at the suggestion of Alexander McDonnell, Esq., of Sand Point, that this trade was subjected to fiscal regulations —his own connexion with it dating back to 1817. The object of thus placing it under the Customs of the country was to give it such legal protection as would enable those engaged in the trade to invest their money with at least a semblance of Government countenance and protection. The duty on Timber was levied during the Administration of Earl Dalhousie, and as it does not appear to have been thought of sufficient consequence, we have no returns of the sums collected before 1826, and in that year the revenue appears to have exceeded in amount the whole revenue of the Province 30 years previously. The Revenue collected since then, appears by the following table:—

	Slide Dues.	Ground Rent.	Saw Logs.	Revenue collected on the Ottawa.
1826	.....	.....	.....	$10612
1827	.....	.....	.....	13226
1828	.....	.....	.....	19792
1829	.....	.....	.....	18594
1830	.....	.....	.....	33530
1831	.....	.....	.....	40090
1832	.....	.....	.....	24414
1833	.....	.....	.....	26553
1834	.....	.....	.....	28290
1835	.....	.....	.....	54067
1836	.....	.....	.....	57209
1837	.....	.....	.....	53260
1838	.....	.....	.....	57793
1839	.....	.....	.....	62528
1840	.....	.....	.....	79606
1841	.....	.....	.....	80702
1842	.....	.....	.....	137588
1843	.....	.....	.....	86382
1844	.....	.....	.....	95392
1845	$28264	.....	.....	137505
1846	26440	.....	.....	146908

	Slide Dues.	Ground Rent.	Saw Logs.	Revenue collected on the Ottawa.
1847	23965	.....	.....	132889
1848	20022	.....	.....	93763
1849	21321	.....	.....	92117
1850	22862	.....	.....	91221
1851	23554	$7060	$8070	110998
1852	29912	10969	13725	143351
1853	28844	14544	18833	148090
1854	28888	19686	26403	184718
1855	28450	22215	19143	150368
1856	32269	24414	19221	167313
1857	35934	21119	23278	197514
1858	27936	22119	21162	156800
1859	33724	19667	34007	182850
1860	44417	22904	44147	203540
1861	49660	19008	42474	219533

This table shows prominently periods at which great fluctuation occured in the course of this trade, and on investigation, we shall find that this is owing to three causes—fiscal arrangements in Great Britain; reduction of the rate of freight, by commercial aberration; or increased facilities to enable Timber to reach its market.

The first of those remarkable movements occurred in 1835, when the duty suddenly rose from $28,290 in the previous year, to $54,067. The next was in 1842, when it rose from $80,702 in the previous year, to $137,588; and the next was in 1845, when it rose from $95,392 in 1844, to $137,505. In 1846 it was at $146,908, but it fell to $96,763 in 1848. It continued depressed till 1850, when it had reached $91,221, but in 1851 it was at $110,998, and it has steadily increased ever since.

Commerce, as a general rule, is subject to periodical fluctuations, and of course this trade forms no exception; but the true explanation of those now detailed is to be found in the fact that while its production in this country was trammelled by a series of regulations framed for the most part by people totally ignorant of its wants, or bearing on the interests of the Province, it was subject in England to fiscal regulations, continually varying with the policy of the Chancellor of the Exchequer for the time being, and invariably adapted to suit the theory of the moment, without any reference to the interests of the people most concerned. If this evil had been met by corresponding measures of encouragement

in this Province, the people would have reaped more real advantages from this traffic than they have yet experienced, but the fatal policy of making it subservient to emigration, crippled the trade in its infancy, and still hangs like a mill-stone around its neck. The impetus to the trade in 1835 is to be traced to the high productive duty in favour of Colonial Timber, then imposed in Great Britain, and to the establishment of regular tug boats on the St. Lawrence, as well as the facilities afforded by works of improvement on the Ottawa River. The cause of the extraordinary fluctuation from 1842 to the present, may be understood by the following statement: "On 10th October, 1842, the duty on Timber imported into "Great Britain was reduced, on Foreign, from £2 15s. 6d. per "load, and 5 per cent., to £1 10s.; and on Colonial, from "11s. 6d. per load to 1s., and 5 per cent., the result of which "was, in 1843, an increase in the imports of Square Timber, from "Foreign Ports, of 31 per cent., and from the Colonies of Canada, "New Brunswick and Nova Scotia, of 38 per cent., over the "average import of six years previous. On 10th October, 1843, "the duty was further reduced from £1 10s. to £1 5s. per load, "and five per cent., at which it continued till the end of the year "1846. During this period the importation of Foreign Timber "experienced a further increase of 107 per cent., over that of "1843, while the Colonies suffered a decrease of 13 per cent." In the beginning of the year 1847, the duty on Foreign Timber was again reduced from 25s. to 20s. per load, and with this reduction the importation from Foreign Ports increased again 12 per cent., while the importation from the Colonies suffered a decrease of 12 per cent. In the year 1848 the duty on Foreign Timber was reduced from 20s. to 15s. per load, at which rate it remained till 1851. During this period, Foreign importations advanced 14 per cent. from those of 1847, and Colonial 22 per cent. In 1851 the duty on Foreign Timber was reduced from 15s. to 7s. 6d., and during the time it had been at that rate, there has been an increase of 148 per cent. on the importations of the three previous years, while those of the Colonies have decreased 58 per cent. The direct effect of the reduction of duty on Timber has been, that the importation into London in the year 1859 was an increase upon that of 1840, of 574 per cent. on the Foreign, and a decrease of 58 per cent. on the Colonial. The effect on the London market has been selected as an example, and because it consumes one-fourth of the Timber importations of the United Kingdom, and it

amounted in 1859 to 563,143 tons, not less than two-thirds of which were supplied by the Forests of Northern Europe. These circumstances fully account for the fluctuations in the trade; and its steady decline from the preponderating position it occupied in 1847 is solely to be traced to the fact that the inferior Timber of Northern Europe can be procured at a cheaper rate; while in Canada we had to contend with greater cost of production, by higher wages, and want of sufficient facility for taking the article so produced to market. When it is remembered that Canadian Timber generally makes an average voyage of 500 miles, before it reaches Quebec, and that this operation involves expenses equal to a dozen transhipments; that the very Pork eaten by the producers has to perform a voyage of nearly 1700 miles before it reaches its destination; some idea may be formed of the cost attendant on production, and the value of the article produced, which enables it to hold its own in the British market with such serious disadvantages. The following table of the quantity of Timber and Deals exported from Quebec to the United Kingdom, for the last fifteen years, will throw much light on this subject:

	Sq. Timber, C. Ft.	Deals.	Total.
1845	24,223,000	6,879,617	31,102,617
1846	24,242,689	5,655,986	29,893,675
1847	19,060,880	7,112,963	26,173,843
1848	17,402,360	6,514,083	23,916,443
1849	18,581,560	6,648,746	25,230,306
1850	19,534,320	6,465,623	25,999,943
1851	22,210,080	4,507,133	26,717,213
1852	20,361,960	4,600,534	24,961,894
1853	22,129,120	7,054,838	29,183,958
1854	25,346,800	7,966,958	33,313,758
1855	15,389,774	5,512,500	20,702,274
1856	19,409,152	7,431,790	26,740,942
1857	24,995,750	10,521,041	35,516,801
1858	17,571,240	10,160,475	27,731,715
1859	19,115,360	9,291,594	28,406,954
1860	.....	.....	.....
1861	.....	.....	.....

The average quantity produced is about 30,000,000 cubic feet Square Timber, and 400,000,000 feet b. m., equal 34,000,000 cubic feet Sawn Lumber, altogether 64,000,000 c. feet per annum. The duties levied in Canada on Square Timber cut on Crown

Lands, is ¼d. per cubic foot, and on Saw Logs 5d. currency per log, without reference to size. No duty is imposed on Timber cut on *private lands*.

In the year 1845 the export from Quebec formed 32 per cent. of the imports to the United Kingdom; in 1846, 29 per cent.; 1847, 28 per cent.; 1849, 31 per cent.; 1851, 25 per cent.; 1852, 24 per cent.; 1854, 27 per cent.; 1855, 22 per cent.; 1856, 22 per cent.; 1857, 28 per cent.; 1858, 25 per cent.; 1859, 21 per cent. This falling off of 11 per cent. on the whole trade is due to the increase of importation from the Baltic, consequent on the withdrawal of a protective duty.

The whole imports of the United Kingdom, in the year 1859, were, as computed from the Board of Trade tables, 1,300,000 loads of 50 cubic feet each, of Colonial; and 1,300,000 loads of Foreign Timber, making a total of 130,000,000 cubic feet, of which Canada furnishes about 24 per cent.; the tonnage would be probably equal to 3,000,000 tons, of which we furnish probaby 750,000; of this, fully 600,000 tons are the produce of the Ottawa country, and the trade there is carried on more extensively than in any part of the British Empire.

According to the best possible estimate, this trade employs 15,000 men in the woods; and counting those engaged in the various operations of the manufacturing establishments, 10,000 more, so that a total of 25,000 men are engaged in this traffic, on the Ottawa River. The yearly consumption of provisions, by the producers of Square Timber is stated to be 12,000 barrels of pork, 15,000 barrels of flour, some 100 tons of sundries, 6,000 tons of hay, and 275,000 bushels of oats; and the same quantity of provisions is required for the production of Saw Logs; so that something like 26,000 tons of Agricultural produce is required for the purposes of this trade.

The Trade Returns for 1859 give the amount of seamen required to man the fleet which takes the Lumber destined for European markets from Quebec, as 17,064; to those must be added the men engaged on our inland navigation, in transporting same Lumber to the States, and the total number of seamen employed will not fall far short of 25,000 men. It would not be an easy task to enumerate the men employed indirectly in the manufacture of Lumber, nor could the returns of the actual number engaged in the trade itself be easily made out, but it is certain that 75,000 men would be within the probabilities of the case; and the actual money

invested in mills, dams, booms, road and other improvements, on the Ottawa and its tributaries, is fully over £1,000,000 currency. Some of these establishments for sawing Lumber are worth £75,000.

The value of this Staple Trade as an agent for developing the resources of the Province, is incalculable; it provides employment for the emigrant, either directly, or in the farming operations to which its wants give rise; it requires the services of a large and powerfully manned fleet; and it gives the first impulse to native manufactures, by the necessity for furnishing its own material, in the shape of deals, battens, and scantling;—and the variety and extent of machinery required, to produce every article of Lumber, from the common plank to the elaborate and highly finished panel door, or window sash, has called into existence an order of mechanical engineers and machinists, who, for fertility of invention and manual perfection of the material under their hands, as well as its intrinsic mechanical value, are not excelled by the mechanical genius of any other country.

If the period when the first raft left the Gatineau be contrasted with the development of the trade in any of its future stages, it will be found that it has steadily advanced in the development and application to its own peculiar manufacture of the mechanical arts; and, although there is a great difference between the raft of 1806, with its withe cables and wooden anchors, and the giant that now moves in the wake of a powerful tug steamer, with its appliances of chains, capstains, and anchors, it is still easy to trace the steady progress and development of the skill which enables this traffic, against all the advantages of Northern Europe, to hold its own in the markets of Great Britain.

In most instances the operation of *mouthinetting* was performed quite recently by hand, now it is done by steam, and in one instance at least, that power has been applied to raft Timber above this city. If it is a true axiom of political economy that the increase of mechanical appliances benefits mankind, then the people of Canada owe a great deal to the Lumber trade—and its value is not yet fully developed.

To make White Pine payable, it must reach a price equal to 7½d. currency, per foot, in the Quebec market; the cost of freight, risks and insurance on property raise that to 2s. sterling, in Great Britain. Inferior Pine, coming from the Baltic, can be bought for 1s. to 1s. 6d. sterling, hence the cause which limits our Timber,

for years, to an almost uniform quantity and quality. But Canada possesses large Forests of Timber far superior to the Baltic Pine, while inferior to her own market'ble Timber. This description has never been brought to market, because it could not be produced so cheaply as to warrant it, when the freight, profits and risks were added to first cost, competing with the Baltic Timber in the market. The usual charges for freight from Quebec, ranges from twenty-five shillings to thirty-five shillings per ton. At the lowest rate that would be about worth the price of the article in Quebec, and this would bring it to 1s. sterling per cubic foot; the cost of insurance, loading and Port dues, with the profits, makes up the figure it now stands at. Since 1860, all protective duty has been withdrawn from the Canadian Timber in the British market, and that furnishes another reason why we cannot compete with the inferior varieties offered for sale there. The greater part of the Timber fleet arrive here in ballast, or with such small cargoes that they look to the return voyage solely to compensate them for the whole trip out and home—hence the high rates of freight as between Quebec and British Ports. Now it is evidently the true policy of Canada to endeavour to reduce this freight to rates more consonant with the length of a voyage between their seaports and those of Great Britain. We possess very many advantages during the navigable season over the Ports of the United States, and we have been able to accomplish much quicker voyages, whether in sailing or steam craft. This is to be ascribed, in some measure, to having to traverse less distance, but it also depends on being able to take advantage of prevailing winds and currents which we derive from the more easterly position of our point of departure. The total distance from Quebec to Liverpool is 2,502 miles; from New York, 2,980. Taking the paying cost of freight at 1¼ mills per ton, per mile, it will be found that the cost of transporting a ton of any material between the two cities, should be only $3.75 from Quebec, and $4.47 from New York; but the actual fact is that it is much oftener $3.75 from New York than it is $5 from Quebec. If therefore this trade can be made to compete with other Timber, in European markets, measures must be taken to reduce the freight permanently, one-half at least, and also to reduce the cost of production. This latter measure can only be effected by opening the Ottawa Canals. Then vessels of 600 tons can load at the mills, and if necessary or advisable, tranship

at Quebec, with one-half the cost the same cargo can be now transmitted there. In addition, it opens another market to the westward, where our grain and provision supplies are now concentrated and drawn from; and the pork and flour of Chicago could be delivered on the Ottawa, with an average voyage of 700 miles instead of performing as they do now, one of nearly 1,700 miles.

The tendency of the Lumber trade is to create manufactories, and to train a corps of skilled artisans, wherever those establishments are situated. Of this fact we have ample proof, in the development of the manufactures of this city. Wherever saw mills are established, flour mills are sure to be required—the foundry and the machine shop are certain to follow, and the cotton mill becomes a necessity. Every fall on the Ottawa furnishes a site for those establishments, and it would be no exaggeration to say that as far as manufacturing purposes are concerned, the water power of that river and its tributaries is illimitable. One instance I shall quote on this subject is, that taking the actual fall between the level of Lac Le Chene and the level of the River below the Chaudiere at 67½ feet, there is conserved in those six miles a motor equal to 185,000 horse power. The consequences of improving the Ottawa are to be sought for in the expansion of the Lumber trade, and securing a large proportion of the carrying trade of the Western States. This trade would also rapidly expand by the proposed measure, because the demand for cotton, soon to arise, would increase the traffic between Chicago and the Mississippi, by the exchange of grain for the peculiar staple of the South. The Ottawa River would fulfil all the conditions of a successful competitor for this carrying trade, because, as it must be manufactured in its descent to the sea-board, it possesses the necessary motive power for that purpose, and a Staple Trade to keep up the requirement of full cargoes both ways, by which the carriage can be made profitable at a minimum cost to the consumer.

Any one acquainted with the tendency of commerce to maintain an equilibrium of supply and demand, must be satisfied that the superabundant wealth of the Canadian Forests would be much better employed in supplying the wants of the overpopulated countries of Europe, and the treeless Prairies of the Western States, than to be mercilessly overrun for the choice and fancy Timber therein, while really valuable Timber, constituting nine-tenths of the whole mass, is either left to rot where it grew, or destroyed by fire, or

uselessly expended in endeavouring to get the small proportion now taken out to market.

As detailed, the trade contains within itself the material for its own development, and for the establishment of a commercial and manufacturing power unrivalled on this continent. If fairly treated, it would enable the Canadian people to become the manufacturers for the Western States, and open to this country a supply of mineral fuel from the coal fields of Michigan. At present our supplies of coal are obtained after a tedious voyage down Lake Erie, through the Welland Canal, Lake Ontario, and if destined for Ottawa, through the Rideau Canal, a total distance of 600 miles, of which 154 is canal navigation; while by the Ottawa the distance would not be 400 miles, and the canal navigation under twenty miles.

If a true knowledge of this trade, and of the country we inhabit, weighs with us, we will no longer allow the one to be trifled with, or the other neglected. Here at this city, with its immense natural motive power, we have the means of developing the almost exhaustless mineral wealth within our reach; but both are in a measure useless, because we have not improved the means of access to them. For all practical purposes, the Ottawa country is a natural *Cul de Sac*, whose only means of ingress and egresss are by its river, the navigation of which is partially obstructed. Yet, from the peculiarity noticed of the navigable character of its tributaries and the small height of the dividing ridge between them, and the navigable tributaries of Lake Huron, the means of opening an available channel to the West is within our power physically and profitably.

It is estimated that there is quite enough Lumber; at our present rate of consumption, and of our present marketable quality on the areas now known, to last for a century—but the consumption can be increased 500 per cent., by opening means of access to the westward, without sensibly diminishing the time in which the whole supply would be worked out. Whenever that period arrives, the cotton factory will supersede the saw mill, and the transition to it now would be neither unnatural or violent, when all the facilities are considered. The corps of trained mechanics raised by the development of the ruder trade, will tend considerably to lessen the difficulties under which the establishment of the more elaborate labours. Instances are not rare, where, under every other favourable conjunction, the inauguration of cotton factories

was prevented by the want of the skilled labour necessary to keep its machinery in repair—each set of establishments requiring a complete corps of machinists, but no one able profitably to keep the whole of them employed for its own use.

It must be evident to any one acquainted with this Lumber trade that the further the manufacturer removes from his supplies, the greater the cost of production will become, and consequently the greater difficulty will be experienced in keeping up the competition with the European Timber in the markets of Great Britain. Of late years, we have not been able to force our Timber into any of the markets of continental Europe, owing in part to absurd fiscal regulations, but in a great measure to its excessive cost, when subjected to any import duty. The remedy for all this has been pointed out, and it is the duty of the people to see it applied.

It is necessary, in the further consideration of all matters connected with this trade, to review the conditions under which it is prosecuted. The Executive Government of the Province holds in its own power, the administration of all the waste lands of the Crown, and also their final disposal. The great object in view appears to be the idea of making the disposal of the soil a source of revenue to the Province, and if the preponderance of population had been so great as to make these lands an insignificant per centage of that portion under cultivation, this view would most probably be the right one. But as Lower Canada contains about 134,412,800 acres, and Upper Canada 77,606,400 acres, a total area of 212,019,200 acres, of which 22,337,761 acres have been settled in L. C., and 20,835,984 acres in U. C., or a total of 43,173,745 acres—or only about 34 per cent. of the whole. Under these circumstances it is evident that the general rule should be reversed, and that the collection of mere revenue should be made subservient to settlement. In fact the wild lands or Crown Domain, possess as fiscal elements, two distinct values—the first of their natural productions, such as Forests and Minerals, are legitimate objects from which revenue may and ought to be derived; the second is the value of the soil, and how that value should be employed in promoting immigration. The mistake made hitherto has been in confounding both these principles, and desiring to raise a revenue off that which in the nature of things should have been given to the stranger seeking a home amongst us, at the lowest possible price. The theory that the land and all that is thereon belongs to the purchaser, is perfectly true and correct, so long as a

system of differential values are imposed. In old settled countries, one thousand acres of land, with orchards, plantations and mill power thereon, will sell for a much larger price than a like quantity without those improvements; but in Canada, the principle adopted was to put the value of the land at an upset price, by which one man probably got considerably less than the value of the money invested, while his neighbour may have been the gainer by hundreds of pounds. Again, in all respects the purchaser in the case of illustration was on a perfect equality with his neighbour, because both properties had contributed to the fiscal burthens of the municipality in which they were situated; but in Canada, the Crown Domain pays no taxes, and the incoming settler has the benefit of all the labours and money of his predecessor. Of the vast tract of waste lands in Canada, amounting to 91,239,055 acres, probably one-third is available for settlement, and of that one-third is possibly covered by valuable Forests.

To a country physically developed as Canada is, without the mineral fuel necessary to make her mineral wealth available, the absolute necessity for conserving her public Forests is apparent. It is evident that on their careful management her future prosperity depends; yet the rule followed lately by the Crown Lands Department tends to destroy, rather than preserve, those natural sources of wealth.

As previously stated, the power to manufacture Timber is awarded to the Lumber Merchant by license for one year. At the end of that period the lands on which the manufacturing operations are carried on may be opened for settlement, if the Government pleases, and the roads, bridges, improvement of streams, farms and *chantiers* of the luckless manufacturer may be taken up by the fortunate Norwegian or Dutch peasant, who may find his way to the Province at the public expense, as a free grant, or grabbed by the keen speculator who had enough of small political interest to get a first instalment accepted. The condition of actual settlement is a mere farce, which has been evaded in ninety-nine cases out of one hundred, and although the "Regulations" are sufficiently stringent, the power to enforce them is wanting. The Lumber manufacturers pay as is stated, a ground rent of 2s. 6d. per square mile, and a duty of ¼d. per foot on the Lumber produced. Taking the area of the limits under operation as 11,000 square miles, equal to 7,040,000 acres, and dividing the revenue accruing this year of $219,544, and the value of the Lumber as

equal to a yield of 23,794,030 c. feet of all kinds, worth at Quebec nine pence per c. ft., a value of $3,569,125, to which may be added the duties, making a total of $3,788,669—or a sum equal to 54 cents per acre. The average duration of one of these limits may safely be taken at ten years, and there is therefore a value of $5.40 per acre realised by the Lumber trade, against a total value, if all paid, of sixty cents per acre, the price at which they would be disposed of to settlers ignorant of the value of the Timber, and sure to destroy it.

It is a matter of no extraordinary occurrence to find $1,000 paid to the Treasury of this Province, as the duties accruing from the Timber cut off 200 acres of land—which, at ¼d. per foot, would give 120,000 cubic feet of Pine Timber.

The vast majority of our Foreign settlers are Irish, Germans, and lately, a few Norwegians. Scarcely any of them understand the proper mode of preparing Timber for the market, and the folly of thrusting those people into the best Pine Forests is apparent enough. After the operations of the Lumber manufacturer have cleared the land of all the valuable available Timber, its capacity for settlement is better for the Foreign immigrant than previously, because his labour will not be absorbed in operations with which he is unacquainted, nor his capital squandered in clearing lands to put down his crop. It is evidently then the duty of the people of this Province to save the Forests from destruction, by having such regulations enforced as will keep settlement confined to localities especially adapted for that purpose, and not force the destruction of the magnificent Pineries of the country, by measures whose only result will be the obstruction of immigration and the hopeless pauperism of the people forced into such localities.

The native population or old settlers shun Pine land for purposes of settlement, because it is much more difficult *to clear* than hardwood land—the Timber being larger, heavier, more difficult to manage, and standing closer together. Indeed nothing can present a more hopeless prospect than a *Pine clearing*, when the Timber is burnt off—an operation of very slow progress. The *stumps* stand so thickly together that it is almost impossible to get down a crop between them; and the physical properties of the tree seem to defy destruction, as it will take twenty years *to rot* those stumps out of the ground. If therefore an old settler or a native Canadian purchases under the recent Regulations, it is with

a view to the value to be derived from the Timber growing on the location, and not from the soil.

Of the lands actually covered by Pine, possibly one-third is fit for settlement, but the indiscriminate system adopted is based on the assumption that all those lands are capable of supporting an agricultural population. The reason of this mistake arises from the want of proper and reliable surveys of the waste lands of the Crown. Under the system now followed, it is made the operator's interest to lay off and sub-divide lands utterly unfit for agricultural purposes—and those lands are opened for sale, regardless of the true interests of the Province. A large proportion of the blame attaches to the Lumber manufacturers themselves, because the tactics followed, till within a quite recent period, was that of preventing information reaching the public of the real state and position of the trade, and the statistics on which it was based. The Government have been always in the habit of treating it as a subordinate agent, useful in a political point of view; and the administration of the Department to which its government belongs, was always entrusted to gentlemen whose experience in politics was supposed to give them a proper degree of aptitude for developing the incipient commerce of the country. Hence this trade has seen such a multitude of Regulations issued for its benefit, from the time when,—at the suggestion of Mr. McDonell, of Sand Point—the then Governor and Council imposed the first fiscal regulations, and seriously proposed to hand over its management and revenue to the different counties in which it was carried on, till the issue of the famous *en bloc* regulations of 1859 put the coping stone on the folly of endeavouring to govern a commercial element of this importance in the manner in which a fee simple could be arranged. This last absurdity, by which Speculators are enabled to acquire the rights of property in the Crown Domain and public Forests is eminently adapted for the frustration of its own declared objects—which are to *encourage settlement*. If the Government of the country cannot dispose of its wild lands at an upset price of three shillings per acre, what chance can private individuals have of inducing settlement at higher rates, on the same lands? But one clause at once explains where the real advantage to the speculator is given—it is that which allows him to receive from the Government such portions of land as are unfit for settlement, as a free grant, for performing settlement duties, and paying for the balance. When it is known that those

Regulations apply to the sale of lands in the public Forests; that one-third of such lands are rarely fit for profitable settlement; that the duties imposed can be discharged by employing men in the useful occupation of getting out Timber; that such Lumber taken off private lands pays the Province no duty, and that as we have shewn, one year's operations will cover the whole outlay—the tendency of those regulations may safely be said to be injurious to the country—subversive of its best interests—obstructive to its commercial development, and destructive to its Staple Trade.

A careful review of all the statistics furnished, will fully prove that the Staple Trade of this Province must be a promoter of immigration to a considerable extent. In fact the very nature of the operations necessarily requiring large supplies of agricultural produce, demands a supply of labour which this country hitherto has not been able to furnish. Hence the high price of manual labour, and the necessity for importing a large proportion of the provisions consumed in this trade. Now to remedy this, it will be necessary to open the navigation of the Ottawa River, thereby affording access to the wealth of the country where the Lumbering operations are carried on, as well as opening new markets for it. This will make settlement profitable on whatever portion of the Forest lands which are available, and will have the same effect of inducing immigration into the Ottawa country, as the construction of the St. Lawrence Canals had on a corresponding movement in Western Canada.

The advance of the Lumber trade cannot be followed by settlement as closely as in the earlier stages of its development. The succession of rapids, their increasing number, and the difficulty of navigating them in ascending the streams, are insuperable barriers to the rapid settlement of the Ottawa country. In addition to which, the Emigration service of the Province has been so ignorantly and viciously organised that none but the very poorest and most helpless of our Foreign immigrants were permitted to reach that district, and these ignorant creatures, located in the midst of some rocky Pinery, managed to do more harm by fires in one year—if they were not previously starved out—than the value of their labours to the general good of the Province could compensate in a lifetime.

The value of the trade to Canada has been fairly stated, and its importance in a public point of view, as a commercial element, deserves to be widely known. In many parts of the Province it

is looked on as a mere local traffic, which it would be advisable to get rid of as soon as possible; and the Lumber Manufacturer viewed as a monopolist, whom it would be good policy to circumvent. Unhappily, both these views have acquired weight from the treatment the trade has received at the hands of the Government, and the absurd policy pursued by the Department on whose *fiat* its existence depends. The Lumber manufacturers themselves helped out this view by carefully concealing all the facts connected with the trade—thus using the weapon of the weak, and endeavoring to preserve a position by astuteness which had no legal recognition.

The future security of the trade demands that the following conditions be enforced, for the purpose of freeing it from the political influences which have hitherto prevented its development:

First.—Fixity of tenure by leasehold, for such terms of years as may be agreed on.

Second.—The assumption of complete Admiralty jurisdiction by the Government over all the tributaries of the Ottawa, navigable for cribs, involving the construction and keeping in repair of the necessary works to facilitate the descent of Lumber to Quebec.

Third.—Such surveys of those tributaries as will define what portion of the lands from which their waters are derived is available for settlement, and what portion must always remain a Forest.

Fourth.—The incorporation of the trade, for purposes of self-government.

Fifth.—The establishment of Regulations by which a standard of quality, necessary to describe the kind and variety of Timber shipped would be defined.

And lastly,—The repeal of all charters by which grants of the Public Domains have been conceded, for purposes of private speculation, and the establishment of such Regulations as would effectually prohibit speculation in Crown Lands to non-settlers.

The wisdom of giving the Lumber merchant an interest in his Limit, beyond that of dependance on the *fiat* of an Order in Council, is apparent. In addition to the useless and wasteful method of the present mode of manufacturing, the losses by fire to which it gives facility, no care is taken of the young and growing Timber. As previously stated, in a Pine grove one-tenth is very probably marketable Pine, from 80 to 150 years of age; four-tenths is good Pine, of similar age, but obliged to be left in the

Forest, because of some trifling defect which prevents its squaring to the size of a marketable stick; and five-tenths are young Pine unfit to cut at all, but capable of furnishing, with care, good Timber by the time the other two varieties are exhausted. As the manufacturer has no direct interest in preserving this Timber, and as he is frequently in dread of having his Limits divided and put up for sale, in the anxiety to take the greatest amount of value out of them, he destroys fully as much growing Timber as he takes to Quebec. Nor is this all, the loss in manufacturing amounting to fully 16 per cent of the whole each year, furnishes fuel for those fires which have destroyed in one season more Timber than has been carried to Quebec since the trade was in existence. A leasehold will cure the first and last of those evils, by making it the interest of the occupant to conserve the public property; but the only remedy for the loss in manufacturing is to open the navigation of the Ottawa, and enable the saw to do the work now performed by the axe. It has been calculated that the actual amount of loss sustained in the destruction of Timber in *squaring*, is equal to $500,000 per annum, and this is incurred by the present system of manufacture, which is necessitated by the want of necessary facilities for shipping the Timber at a point nearer the place where it is produced, than Quebec.

The necessity for the second condition is to be found in the fact, that the progress of settlement frequently imposes artificial obstructions in the shape of ill-designed, and worse constructed bridges, mill dams, and other structures, to the navigation of the streams. In many cases too, those rivers, from the system of surveys followed, by making artificial instead of natural lines, the boundaries, have become private property. In every sense of the term this is a grave mistake, and must be remedied at once.

The third condition is imposed by the nature of the case, and the necessity of making the area and value of the property to be leased known.

And the necessity of the fourth is imposed by the very nature of commerce. It is as much the interest of the people of Canada to conserve this trade, as it would be of a private individual to preserve a single plantation at his disposal; and it is perfectly ridiculous to allow 30,000,000 c. feet of timber to be produced in one season, when the demand would be supplied by 15,000,000 c. feet. The producers may injure each other by competition, but the Province, the real owner of the property, is irretrievably

injured without a chance of compensation—the productions of her Forests, for over a century is swept away, by the recklessness of a few commercial gamblers, or a knot of trading speculators who find their own account in the transaction.

The Lumber Manufacturer has not only to contend against the depressions incidental to commerce, but in the prosecution of this important trade, he has to face the blunders or chicanery of politics, and after expending a large sum of money on his Limit improvement it would not be an uncommon thing to have a keen backwoods pioneer demand so much per 100 acres, for the Timber growing on one or two lots thereon, which he had located and paid an instalment for into the Crown Land Department.

It is evident then, when the importance of this trade is duly considered, that it requires legal recognition and protection, and that the country provide such facilities for its prosecution, as will enable it to maintain its standing against all competition in foreign markets. Above all things, the idea should be abandoned that its interests are subservient to those of settlement. The experience of past years furnishes convincing proofs that it must become a primary agent in the settlement of the country, and that the failure of all attempts to effect that great desideratum, arose from the fact of not employing its powers in the legitimate direction. Its development must be effected by supplying the link wanting in the chain of an internal navigation, on which the ultimate success of our commercial and manufacturing interests depends; and the day which sees the Ottawa navigation opened to Lake Huron, will witness a thorough revolution in the commercial and political relations of North America unequalled by any other event in her previous history.

PUBLISHED BY THE

OTTAWA BOARD OF LUMBER MANUFACTURERS.